

REMARKS

The present amendment and request for reconsideration is filed in response to the Office Action mailed August 10, 2005. Claims 11-20 remain pending in the application.

In the Office Action, the Examiner rejected Claims 11-20 under 35 U.S.C. 103(a) as being unpatentable over Duykers et al. (US 4,216,766) in view of Hansen (US 5,453,081).

Respectfully, the Applicant disagrees with the Examiner for the following reason.

Previously presented claim 11 recites:

“A device for assisting a patient in promoting the expectoration of secretions from the lungs, said device comprising:

a signal generator for generating an electrical signal;

an amplifier for amplifying said electrical signal;

an acoustic transducer for converting said amplified electrical signal into **acoustic waves**, said acoustic transducer being configured and disposed to be used in ambient air;

and

an acoustic coupling chamber coupled to said acoustic transducer, such that when said device is in use, said acoustic coupling chamber is positioned adjacent an overlaying skin surface; wherein said acoustic waves are applied to the chest cavity of said patient through said acoustic coupling chamber, said acoustic waves having a frequency in a range of about 30 Hertz to about 120 Hertz.” [Emphasis added]

Duykers et al. teaches of an apparatus for treatment of body tissue by means of internal cavity resonance where a human subject is: “partially submerged in an acoustically

conductive medium 12, such as water, contained in a vessel 14. Vessel 14 also contains a transducer 16, which is capable of projecting an acoustic signal 18 into medium 12” [emphasis added] (column 3, lines 52-56). Duykers et al. also teaches that the: “Subject 10 is positioned in medium 12 so that his lung cavity 22 is below the surface thereof. Medium 12 provides an acoustic channel between transducer 16 and the submerged portion of subject 10” [emphasis added] (column 3, lines 61-64).

Hansen teaches of an apparatus proving: “repetitive pressure or force pulses to the body of a human” [emphasis added] (column 2, lines 59-60), this is accomplished using: “A vest, indicated generally at 24, is positioned about body 12. Vest 24 comprises outer jackets 26 and 27 placed about the front and back of thorax wall 13. Jackets 26 and 27 surround flexible air bags or cores 28 and 29 having internal chambers 31 and 32. The material of air bags 28 and 29 is flexible, with the inner side of each air bag located adjacent thorax wall 13. Jackets 26 and 27 are made of rigid shells or non-elastic material that has sufficient rigidity to direct the pulsating forces indicated by arrows 33 and 34, caused by changes of air pressure in air bags 28 and 29 to be directed inwardly into the body toward lungs 17 and 18.” [emphasis added] (column 3, lines 3-12).

It may be clearly seen that the teachings of Duykers et al are directed to an apparatus where a subject is partially submerged in an acoustically conductive medium, such as water, contained in a vessel, the apparatus using a transducer projecting an acoustic signal into the medium to provide an acoustic channel between the transducer and the submerged portion of subject. As for Hansen, its teachings are directed to an apparatus in the form of a vest comprising jackets that are made of rigid shells or non-elastic material that has sufficient rigidity to direct the pulsating forces, the pulsating forces being caused by changes of air pressure in air bags. Thus it is clear that the combination of the teachings of Duykers et al

and Hansen do not teach the subject matter of previously submitted claim 11 since Duykers et al. requires partially submerging the subject in a medium which will provide an acoustic channel between the transducer and the submerged portion of the subject while Hansen requires a vest comprising a rigid shell jackets which will direct pulsating forces caused by changes of air pressure in air bags. It is evident that Duykers et al. relates to acoustic waves transmitted through a non-solid medium while Hansen relates to pulsating forces caused by changes of air pressure in air bags transmitted through vest comprising a rigid shell jackets. Furthermore, the Applicant would like to emphasize that the pulsating forces caused by changes of air pressure in air bags of Hansen are not an acoustic signal as per Duykers et al.

Further still, the Applicant would like to bring forth to the Examiner's attention that the wave generator of Hansen is such that: "Generator 78 has a wave frequency control 94 having adjusting dial 96. Operator or person 11 can manually use dial 96 to adjust the frequency of the signal sent to amplifier 86. The operator or patient can select the wave form and frequency of the signal with generator 78. Amplifier 86 is used to control the power of the signal sent to coil 58 thereby controlling the vibrations and air pumping characteristics of diaphragm 52." [emphasis added] (column 4, lines 20-27) and that: "The vibrations of diaphragm 52 cause air pressure changes or flexion of pressure pulses which are transmitted by the air in the system to air bags 28 and 29." [emphasis added] (column 4, lines 34-37). These pressure pulses are: "a ripple pressure wave which increase and decrease the pressure of the air in chamber 59 and air cores 28 and 29 in an air pressure change range of 0.25 psi." [emphasis added] (column 4, lines 42-45). Clearly the generator is used to control a diaphragm to vary air pressure, as indicated by the psi range, and **not** to produce acoustic waves, thus is not habilitated to control transducer 16 of Duykers et al., which produces an acoustic signal 18.

Further to the above, the Applicant would like to bring forth to the Examiner's attention that Duykers et al. does not disclose the nature of the transducer 16 nor of the control device 20 coupled to the transducer 16. The transducer 16 being positioned underwater and being used while a human subject is partially submerged in the water, it may be warranted to assume that it is not electrical in nature in which case the generator 78 of Hansen, which is connected to a coil 58, may not be used with it.

The Applicant submits that explicit teaching or suggestion is needed to support an obviousness rejection. As submitted above, Duykers et al. and Hansen use different means and thus teach away from each other.

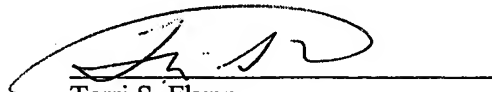
The Applicant therefore submits that nothing in the references applied by the Examiner, taken individually or collectively, would suggest or motivate one skilled in the art a device as recited by previously presented claim 11.

The Applicant therefore submits that previously presented claim 11 is not unpatentable over Duykers et al. in view of Hansen. Furthermore, the Applicant submits that previously presented claims 12-20 dependant on previously presented claim 11 are also not unpatentable over Duykers et al. in view of Hansen for the same reason.

Applicants respectfully request favorable reconsideration of the present application.

Respectfully submitted,

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